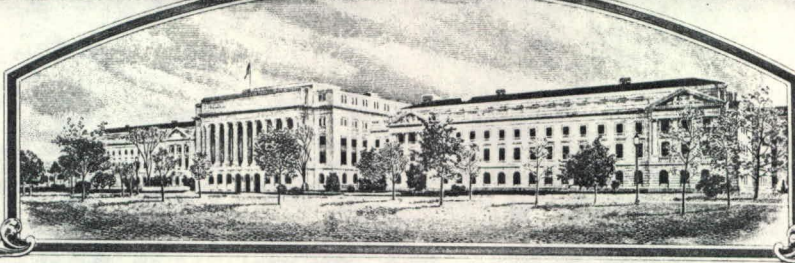


No.

8100046



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**John Bodger & Sons Co.**

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXPOSE THE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT OF AUGUST 30, 1930, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

MARIGOLD

'Scarlet Sophia'



Attest:

*[Signature]*  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set  
my hand and caused the seal of the Plant  
Variety Protection Office to be affixed  
at the City of Washington  
this 27th day of August in  
the year of our Lord one thousand nine  
hundred and eighty-one.

*[Signature]*  
Secretary of Agriculture



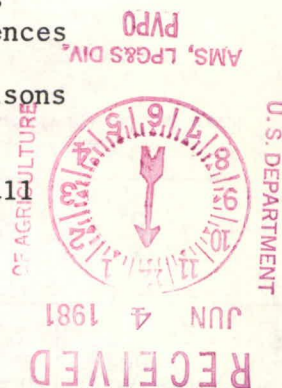


## INSTRUCTIONS

**GENERAL:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.





# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY		1b. VARIETY NAME SCARLET SOPHIA <i>sc 6/1/81</i>		FOR OFFICIAL USE ONLY	
2. KIND NAME MARI GOLD		3. GENUS AND SPECIES NAME TAGETES PATULA		PV NUMBER 8100046	
4. FAMILY NAME (BOTANICAL) COMPOSITE		5. DATE OF DETERMINATION 10-1-79		FILING DATE 2/2/81	
6. NAME OF APPLICANT(S) JOHN BODGER & SONS CO.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 5090 El Monte, Ca. 91734		TIME 12:00 <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">P.M.</span>	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) CORPORATION		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION CALIFORNIA 2-7-12		DATE 2/2/81	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Howard Bodger P. O. Box 5090 El Monte, Ca. 91734		11. DATE OF INCORPORATION 2-7-12		FEE RECEIVED \$ 500.00 \$ 250.00	
13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:		8. TELEPHONE AREA CODE AND NUMBER (213) 442-6161		DATE 7/27/81	

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☒ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

January 27, 1981  
(DATE)

JOHN BODGER & SONS CO.  
*John D. Bodger*  
(SIGNATURE OF APPLICANT) President

(DATE)

(SIGNATURE OF APPLICANT)



13 A)

SCARLET  
MARIGOLD, ~~RED~~ SOPHIA *dc 6/1/81*

## BREEDING PROCESS

GOLDIE (BURPEE) x RED LARGE FLOWERED  
CRESTED BREEDING LINE

F-1 INDIVIDUAL (X)

F-2 SEGREGATING POPULATION

SEVERAL GENERATION OF SELFING  
SINGLE PLANT SELECTIONS TO  
FIX THE CHARACTERISTICS OF  
THE VARIETY.

~~RED~~ SOPHIA *dc 6/1/81*  
SCARLET

*NAME CORRECTED BY APPLICANT - RFS 5/13/81 dc 6/1/81*



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25% COTTON FIBER





- 13 A) To date the only variants that have occurred during the reproduction and multiplication by sib matings and then by open pollinated field production have been less than .01% taller plants and less than .01% off color plants. This percentage was determined by observing in excess of 20,000 plants. The only other variant that would be expected to occur in any amount would be single flowers instead of semi-double flowers. The variety can be considered stable due to the small number of off types observed in the production field. See enclosed pedigree for geneology, breeding methods and selection method.







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13 B) Revised

Marigold Scarlet Sophia is novel because of its distinct red flower color compared to Queen Sophia whose flower is orange red, and Goldie whose flower is yellow-orange. All three varieties have the same semi-double flat carnation-type flower, bilaterally symmetrical, averaging 5.5 cm across. All three varieties have essentially the same habit, height and flowering date. The color difference is described in terms of the Royal Horticultural Society's color cards (published in England):

	Scarlet Sophia	Queen Sophia	Goldie
Dorsal side of the petal	Red 45A	Orange-red 34A	Orange-red 34A
Tip of the dorsal side	Red 45A	Orange-yellow 17A	Orange-yellow 17A
Ventral side of the petal	Yellow-orange 14A	Orange-yellow 17B	Yellow-orange 15A



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32X POLICIA 1508

STOAN BOM

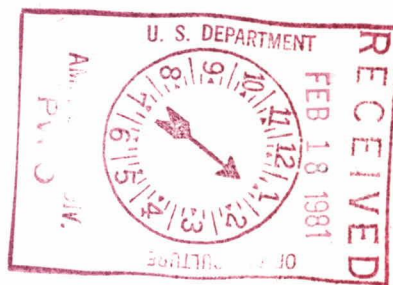


8100046

13 B) Marigold Scarlet Sophia is novel because of the distinct red flower color of the flat carnation flowers which distinguish it from Marigold Queen Sophia which is the most similar previously existing variety. The plant habit and flower type of Scarlet Sophia is the same as that of Queen Sophia and also similar to that of Marigold Goldie but Goldie is an entirely different color.



U.S. DEPARTMENT OF JUSTICE  
FEDERAL BUREAU OF INVESTIGATION  
WASHINGTON, D.C. 20535





## 6. FLOWER: (Continued)

☐ 1 Ray: 1 = FLATTENED 2 = CURLED/TWISTED (*Fantastic*)

☐ 3 Apices: 1 = ENTIRE 2 = LOBED 3 = NOTCHED

☐ 1 SURFACE - Dorsal: }  
☐ 1 SURFACE - Ventral: } 1 = GLABROUS 2 = PUBESCENT 3 = PUBESCENT ON APICE ONLY

☐ 1 LUSTER - Dorsal: }  
☐ 2 LUSTER - Ventral: } 1 = SHINY 2 = DULL

☐ 1 PATTERN - Dorsal: } 1 = SOLID 2 = SPOTTED 3 = STRIPED

☐ 1 PATTERN - Ventral: } 4 = PICOTEE 5 = OTHER (*Specify*) \_\_\_\_\_

☐ 1 Color: 1 = SOLID 2 = BICOLOR (*Specify colors*): Ventral Primary 45A Dorsal Secondary 14A

State color standards used: RHS COLOR CHARTS

SIZE (Use outer row of first matured flower):

☐ 2 ☐ 7 MM. LONG

☐ 1 ☐ 8 MM. WIDE

☐ 3 Disc: 1 = ABSENT 2 = PRESENT, COVERED 3 = PRESENT, UNCOVERED

☐ 1 Type: 1 = NOT QUILLED 2 = QUILLED

## 7. DISEASE RESISTANCE (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ 0 ROOT-ROT (*Phytophthora*)

☐ 0 VIRUS YELLOWS

☐ 0 GREY MOLD (*Botrytis*)

☐ 0 FUSARIUM WILT

☐ 0 STEM ROT (*Sclerotinia*)

☐ 0 WITCHES BROOM

## 8. INDICATE A VARIETY THAT MOST NEARLY RESEMBLE THAT SUBMITTED

CHARACTER	VARIETY	CHARACTER	VARIETY
Plant shape	Queen Sophia	Flower size	Queen Sophia
Plant size	Queen Sophia	Flower shape	Queen Sophia
Foliage	Queen Sophia	Flower color	Queen Sophia

## INSTRUCTIONS

REFERENCES: The following publications may be used as a reference aid for completing this form:

(a) Bailey, L. H., 1949, Manual of Cultivated Plants, MacMillan.

(b) Royal Horticulture Society, 1965, Dictionary of Gardening, Oxford.

(c) Wyman, Donald, 1971, Wyman's Gardening Encyclopedia, MacMillan.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.



OBJECTIVE DESCRIPTION OF VARIETY  
MARIGOLD (TAGETE)

## INSTRUCTIONS - See Reverse.

NAME OF APPLICANT(S) <b>JOHN BODGER &amp; SONS CO.</b>	FOR OFFICIAL USE ONLY
ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code) <b>P. O. Box 5090 El Monte, Ca. 91734</b>	PVPO NUMBER <b>8100046</b>
	VARIETY NAME OR TEMPORARY DESIGNATION <b>SCARLET SOPHIA 2/5 5/5/81</b>

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g.  or ) when number is either 99 or less or 9 or less.

## 1. SPECIES TYPE:

<input type="text" value="2"/>	1 = ERECTA (African)	2 = PATULA (French)	3 = TENUIFOLIA (Signata)	4 = LUCIDA (Sweet)
	5 = OTHER (Specify) _____			

## 2. PLOIDY:

<input type="text" value="3"/>	1 = DIPLOID (n = _____)	2 = TRIPLOID (n = _____)	3 = TETRAPLOID (n = <u>12</u> )
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## 3. PLANT TYPE/HABIT:

<input type="text" value="1"/>	1 = EXTRA DWARF (Miniature, petite) < 20 CM.	2 = DWARF 25- 35 CM.	3 = SEMIDWARF 40- 55 CM.	4 = TALL > 60 CM.
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<input type="text" value="2"/>	1 = ERECT	2 = SEMIERECT	3 = DECUMBENT
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<input type="text" value="1"/>	1 = COMPACT	2 = LAX
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<input type="text" value="1"/>	Flowering:	1 = LONG SEASON	2 = SHORT SEASON
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## 4. LEAF (Middle of first flowering branch):

<input type="text" value="2"/>	Type:	1 = SIMPLE	2 = COMPOUND
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<input type="text" value="2"/>	Leaflet:	1 = OVATE	2 = LANCEOLATE	3 = ELLIPTIC	4 = FILIFORM
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<input type="text" value="3"/>	Margin:	1 = ENTIRE	2 = CRENATE	3 = SERRATE	4 = DENTATE	5 = INCISED
--------------------------------	---------	------------	-------------	-------------	-------------	-------------

<input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="1"/>	CM. LONG	<input type="text" value="8"/> <input type="text" value="0"/>	MM. WIDE	<input type="text" value="1"/>	Anthocyanin pigment in petioles:	1 = ABSENT	2 = PRESENT
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<input type="text" value="1"/>	Glands:	1 = PUNCTATE	2 = LARGE DOTS	<input type="text" value="2"/>	Glands:	1 = BASAL	2 = APICAL
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<input type="text" value="4"/>	Odor:	1 = NONE	2 = MILD FRAGRANCE	3 = STRONG FRAGRANCE	4 = MILD "MARIGOLD"	5 = STRONG "MARIGOLD"
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## 5. STEM:

<input type="text" value="1"/>	1 = STRAIGHT	2 = ZIGZAG	<input type="text" value="1"/>	1 = BRITTLE	2 = FLEXIBLE
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<input type="text" value="1"/>	Anthocyanin:	1 = ABSENT	2 = ALONG VEINS ONLY	<input type="text" value="1"/> <input type="text" value="4"/>	CM. FROM BASE OF STEM TO INVOLUCRE OF TERMINAL FLOWER
			3 = SOLID COLORATION		

<input type="text" value="0"/> <input type="text" value="5"/>	CM. FROM BASE OF MAIN STEM TO AXIL OF TOP BRANCH	<input type="text" value="0"/> <input type="text" value="9"/>	CM. FROM AXIL OF TOP BRANCH TO INVOLUCRE OF TERMINAL FLOWER
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<input type="text" value="0"/> <input type="text" value="2"/>	NO. OF INTERNODES BELOW FIRST BRANCH	<input type="text" value="0"/> <input type="text" value="8"/>	NO. OF FIRST ORDER BRANCHES (from main stem)
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## 6. FLOWER:

<input type="text" value="3"/>	Type:	1 = CARNATION	2 = CHRYSANTHEMUM	3 = OTHER	<u>Flat carnation</u>
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<input type="text" value="2"/>	1 = SINGLES	2 = <del>DOUBLES</del> /Semi-
--------------------------------	-------------	-------------------------------

<input type="text" value="1"/>	Silhouette:	1 = FLATTENED	2 = ROSETTE	3 = GLOBULAR
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<input type="text" value="2"/>	Odor:	1 = NONE	2 = MILD FRAGRANCE	3 = STRONG FRAGRANCE	4 = MILD "MARIGOLD"	5 = STRONG "MARIGOLD"
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- 13 D) See enclosed seed samples of ~~Red~~ <sup>SCARLET R/S 5/13/81 AC 6/1/81</sup> Sophia and the two comparison varieties Goldie and Queen Sophia for seed differences. It required ~~Red~~ <sup>SCARLET AC 6/1/81</sup> Sophia 6 days to germinate while Goldie germinated in 5 days and Queen Sophia germinated in 3 days. No differences were noted in the seedling stage of growth of the 3 varieties as appearance and color of the stems, cotyledons, and first true leaves were similar.

Anthesis of the first flower occurred after 49 days for ~~Red~~ <sup>SCARLET AC 6/1/81</sup> Sophia while it took 48 days for Queen Sophia to flower and 47 days for Goldie to flower. All three varieties have semi-double flat carnation flowers that are bilaterally symmetrical and average 5.5 cm across. (See silhouette exhibit) The RHS color chart reading for flower color on ~~Red~~ <sup>SCARLET AC 6/1/81</sup> Sophia was 45A for the dorsal side and 14A for the ventral. For Queen Sophia 34A for the dorsal with the tip of the dorsal being 17A and the ventral 17B, for Goldie the dorsal was 34A with the tip of the dorsal being 17A and the ventral 15A. All three varieties had a similar plant habit and branching demonstrated by the enclosed slides.

At maturity the height was an average 14 cm for ~~Red~~ <sup>SCARLET AC 6/1/81</sup> Sophia with Queen Sophia being 16 cm and Goldie 15 cm. Internode length, number of first order branching and number of internodes were similar for the 3 varieties. Foliage color at maturity was 137B for ~~Red~~ <sup>SCARLET AC 6/1/81</sup> Sophia while Queen Sophia was 147A and Goldie 146A. For differences





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13 D) in leaf serration of the three varieties see the enclosed silhouette exhibits. There were no apparent disease differences among the 3 varieties.



and one-half inch wide, off an ordinary roll of paper  
and one-half inch wide, off an ordinary roll of paper  
and one-half inch wide, off an ordinary roll of paper

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25% COTTON FIBER





MARIGOLD



SCARLET  
RED SOPHIA



QUEEN SOPHIA



GOLDIE

NAME CORRECTED  
BY APPROPRIATE 145 5/12/81  
dc 6/1/81







MARIGOLD



SCARLET  
REED SOPHIA

QUEEN SOPHIA

GOLDIE

NAME CORRECTED  
BY APPLICANT RJS 5/13/81  
de 6/1/81



FEB 2 1981

